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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HANLEY, BRITT D

ART UNIT	PAPER NUMBER
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2889

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12/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/557,633	Applicant(s) MARIEN ET AL.	
	Examiner BRITT HANLEY	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/17/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☒ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

[01] A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/09/2008 has been entered. Claim 12 has been cancelled in the application and claims 1-11, and 13 are pending.

Claim Rejections - 35 USC § 112

[02] Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not enable one skilled in the art to create a lamp base of hard glass that fractures under a thermal stress of an incandescent mode of the lamp. The specification further does not enable one skilled in the art to create a high discharge lamp whose incandescent mode produces a thermal stress sufficient to fracture a hard glass lamp base.

Claim Rejections - 35 USC § 102

[03] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[04] Claims 1, 2, and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Reger *et al.* (US 2,175,361).

[05] Regarding claim 1, Reger *et al.* disclose a high-pressure discharge lamp (fig. 1) comprising: an outer envelope (20, fig. 1) in which a discharge vessel (1, fig. 1) is arranged around a longitudinal axis (not labeled, but fig. 1 shows discharge vessel symmetric about a longitudinal axis), the discharge vessel enclosing, in a gas tight manner (hermetically sealed, column 2, lines 30-43), a discharge space (shown but not labeled in fig. 1) provided with an ionizable filling (column 2, argon, mercury), the discharge vessel having a first (6, fig. 1) and a second (7, fig. 1) mutually opposed neck-shaped portion through which a first (4, fig. 1) and a second (5, fig. 1) current-supply conductor, respectively, extend to a pair of electrodes (2, 3, fig. 1) arranged in the discharge space (shown in fig. 1), a lamp base (8, fig. 1) of electrically insulating material (ceramic material, column 2) supporting the discharge vessel (as shown in fig.1; column 2 lines 39-43) via the first and second current-supply conductors (as shown in fig. 1), the lamp base being provided with a first (11, fig. 1) and a second (12, fig. 1) contact member connected to the respective first and second current-supply conductor (as shown in fig. 1), at least one of the lamp base , the first contact member and the second contact member are configured to form an end-of-life device that fails upon the occurrence of an arc discharge (the prior art discloses the limitations of the

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instant claim and therefor the lamp base, first contact member, and second contact member will function as an end-of-life device).

[06] Further, claims directed to an apparatus must be distinguishable over the prior art in terms of structure rather than function. Since Reger *et al.* discloses the same structure, the functional claim limitations are anticipated by Reger *et al.*

[07] Regarding claim 2, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1, characterized in that the lamp base is made from a soft glass, hard glass, or ceramic material and has a softening point whereby said lamp base fractures under a thermal stress of an incandescent mode of the lamp (ceramic material, column 2).

[08] Regarding claim 5, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1, characterized in that the lamp base supports the outer envelope (column 2, lines 39-43), the outer envelope encloses the first and second current-supply conductors (as shown in Figure 1), and the outer envelope is connected to the lamp base in a gas-tight manner (hermetically sealed, column 2, lines 30-43).

[09] Regarding claim 6, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 5, characterized in that the first and the second contact member issue from the outer envelope (see 17 and 18, Figure 1).

[10] Regarding claim 7, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1, characterized in that an exhaust tube (23, Figure 1) for evacuating

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the outer envelope (exhaust tube) is provided in the lamp base (as shown in fig 1) or in the outer envelope.

Claim Rejections - 35 USC § 103

[11] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[12] The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

[13] Claim 1 is rejected under 35 USC 103 (a) as being obvious over Reger *et al.* (US 6,054,810) in view of Notelteirs *et al.* (DE2006208 B).

[14] Regarding claim 1, Reger *et al.* disclose a high-pressure discharge lamp (fig. 1) comprising: an outer envelope (20, fig. 1) in which a discharge vessel (1, fig. 1) is arranged around a longitudinal axis (not labeled, but fig. 1 shows discharge vessel symmetric about a longitudinal axis), the discharge vessel enclosing, in a gas tight

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manner (hermetically sealed, column 2, lines 30-43), a discharge space (shown but not labeled in fig. 1) provided with an ionizable filling (column 2, argon, mercury), the discharge vessel having a first (6, fig. 1) and a second (7, fig. 1) mutually opposed neck-shaped portion through which a first (4, fig. 1) and a second (5, fig. 1) current-supply conductor, respectively, extend to a pair of electrodes (2, 3, fig. 1) arranged in the discharge space (shown in fig. 1), a lamp base (8, fig. 1) of electrically insulating material (ceramic material, column 2) supporting the discharge vessel (as shown in fig. 1; column 2 lines 39-43) via the first and second current-supply conductors (as shown in fig. 1), the lamp base being provided with a first (11, fig. 1) and a second (12, fig. 1) contact member connected to the respective first and second current-supply conductor (as shown in fig. 1), at least one of the lamp base, the first contact member and the second contact member are configured to form an end-of-life device that fails upon the occurrence of an arc discharge (the prior art discloses the limitations of the instant claim and therefor the lamp base, first contact member, and second contact member will function as an end-of-life device).

[15] Further, claims directed to an apparatus must be distinguishable over the prior art in terms of structure rather than function. Since Reger *et al.* discloses the same structure, the functional claim limitations are anticipated by Reger *et al.*

[16] Furthermore, in the same field of lamps, Notelteirs *et al.* disclose two conductors (63, 65, Figure 1) that form a fuse to prevent striking of an arc in the lamp (basic abstract from Derwent). At the time the invention was made, it would have been obvious to a person having ordinary skill in the art having the references of Reger *et al.* and

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Notelteors to use the fuse members of Notelteirs *et al.* in order to prevent the striking of an arc inside of the lamp.

[17] Claims 2, 3, 4, 8, 10, 11, and 13 are rejected under 35 USC 103 (a) as being obvious over Reger *et al.* (US 6,054,810) in view of Bruggemann *et al.* (US 6,204,598 B1).

[18] Regarding claim 2, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose a base made of soft glass which will fracture under the thermal stress of an arc discharge. In the same field of lamps, Bruggemann *et al.* teach a base made of soft glass (column 2, lines 0-18; column 4, lines 12-33) because soft glass is highly suitable for use with NiFeCr leads (column 4, lines 12-33). Since the combination of Reger *et al.* and Bruggemann *et al.* disclose the structure and materials of the instant claim, the base will deform or crack under a thermal stress of an arc discharge.

[19] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the soft glass base of Bruggemann *et al.* because soft glass is highly suitable for use with NiFeCr leads (column 4, lines 12-33).

[20] Regarding claim 3, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1 containing a first and second contact member (3b & 3a, fig. 1). Reger *et al.* do not appear to explicitly disclose that that the first and the second contact member are made from an oxidized nickel-iron-chromium material.

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[21] However, in the same field of lamps, Bruggemann *et al.* teach a first and second contact member (22, fig. 2) made from an oxidized nickel-iron-chromium material (column 5, lines 45-53) so as to enable high dimensional accuracy (column 1, lines 59-62).

[22] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the first and second contact member of Bruggemann *et al.* because members made from a nickel-iron-chromium material can be present right from the start in the lamp base so as to enable high dimensional accuracy (column 1, lines 59-62).

[23] Regarding claim 4, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1 containing a first and second contact member (3b & 3a, fig. 1). Reger *et al.* do not appear to explicitly disclose that that the first and the second contact member are made from a nickel-iron-chromium alloy.

[24] However, in the same field of lamps, Bruggemann *et al.* teach a first and second contact member (22, fig. 2) made from an oxidized nickel-iron-chromium alloy (column 5, lines 45-53).

[25] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the first and second contact member of Bruggemann *et al.* because members made from a nickel-iron-chromium alloy can be present right from the start in the lamp base so as to enable high dimensional accuracy (column 1, lines 59-62).

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[26] Regarding claim 8, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose the exhaust tube in the lamp base is made from a metal or from a NiFeCr alloy.

[27] However, in the same field of lamps, Bruggemann *et al.* teach an exhaust tube (3, fig. 2) made from a nickel-iron alloy such as nickel-iron-chromium (column 4, lines 21-24; column 5, lines 45-53).

[28] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the exhaust tube of Bruggemann *et al.* in order to add filling gas or halides.

[29] Regarding claim 10, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose that the base comprises soft glass having a softening point such that the base deforms or cracks under a thermal stress of an arc discharge. However, in the same field of lamps, Bruggemann *et al.* teach a base made of soft glass (column 2, lines 0-18; column 4, lines 12-33) because soft glass is highly suitable for use with NiFeCr leads (column 4, lines 12-33). Since the combination of Reger *et al.* and Bruggemann *et al.* disclose the structure and materials of the instant claim, the base will deform or crack under a thermal stress of an arc discharge.

[30] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the soft glass base of Bruggemann

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et al. because soft glass is highly suitable for use with NiFeCr leads (column 4, lines 12-33).

[31] Regarding claim 11, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose at least one of the first contact member and the second contact member is configured to deform or crack under a thermal stress of an arc discharge. However, in the same field of lamps, Bruggemann *et al.* teach a first and second contact member (22, fig. 2) made from an oxidized nickel-iron-chromium material (column 5, lines 45-53).

[32] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the first and second contact member of Bruggemann *et al.* because members made from a nickel-iron-chromium material can be present right from the start in the lamp base so as to enable high dimensional accuracy (column 1, lines 59-62). Since the combination of Reger *et al.* and Bruggemann *et al.* disclose the structure and materials of the instant claim, the first contact member and the second contact member will deform or crack under a thermal stress of an arc discharge.

[33] Regarding claim 13, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose at least one of the first contact member and the second contact member is configured to form a fuse that deforms or cracks under a thermal stress of an arc discharge. However, in the same field of lamps, Bruggemann *et al.* teach a first and second contact member (22, fig. 2) made from an oxidized nickel-iron-chromium material (column 5, lines 45-53).

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[34] At the time of the invention, it would have been obvious to one of ordinary skill in the art, to modify the lamp of Reger *et al.* to include the first and second contact member of Bruggemann *et al.* because members made from a nickel-iron-chromium material can be present right from the start in the lamp base so as to enable high dimensional accuracy (column 1, lines 59-62). Since the combination of Reger *et al.* and Bruggemann *et al.* disclose the structure and materials of the instant claim, the base will deform or crack under a thermal stress of an arc discharge.

[35] Claim 9 is rejected under 35 USC 103 (a) as being obvious over Reger *et al.* (US 6,054,810) in view of Honda *et al.* (US 2003/0076041 A1).

[36] Regarding claim 9, Reger *et al.* disclose a high-pressure discharge lamp as claimed in claim 1. Reger *et al.* do not appear to explicitly disclose the ratio of the distance between the electrodes to the height of the high-pressure discharge lamp along the longitudinal axis lies in a range of 0.02 to 0.2.

[37] However, in the same field of lamps, Honda *et al.* teach a discharge vessel with an overall length of 23.1mm ([0168]) and an inter-electrode gap of 3.5mm ([0176]). Honda *et al.* do not disclose the overall length of the bulb, however, Honda *et al.* do teach a compact high-pressure discharge lamp ([0045]). Further, in order to fall within the claimed range, the overall length would have to be in the range of $17.5 \text{ mm} < \text{hdl} < 175 \text{ mm}$. Since the length of the discharge vessel itself exceeds the minimum length, the overall length of the bulb would have to be less than 175 mm. Since the general conditions of a the claim are disclosed, at the time of the invention, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

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provide the ratio of the distance between the electrodes to the height of the high-pressure discharge lamp along the longitudinal axis lies in a range of: 0.02 to 0.2 because optimization of workable ranges is considered within the skill of the art.

Response to Arguments

[38] Applicant's arguments filed 10/09/2008 have been fully considered but they are not persuasive. Reger *et al.* alone or in combination with Notelteirs *et al.* teach the limitations of claim 1. Because Reger *et al.* disclose the structural limitations recited in claim 1, the functional limitations are inherently met. Further, Notelteirs explicitly discloses contact members functioning as fuses to prevent the striking of an arc inside of the lamp.

[39] Further, claim 1 does not recited that the lamp base must be formed of soft glass. In page 6, Applicant clearly states that the lamp base should be a soft glass (glass with a low soften temperature around 500 °C - see Kimball USP 3668391, column 2, lines 3-13) so that the lamp base fractures under thermal stress. This critical limitation is not found in claim 1. Further, many other prior arts disclose forming a lamp base of a soft glass. If the lamp base is formed of soft glass, it will necessarily deform under the arc discharge because the temperature in the lamp is above the softening point.

[40] Applicant argues that Bruggemann teaches away from the present invention because he discloses a lamp base with a softening temperature of 680 °C. However, Examiner notes that no softening temperatures are claimed.

Conclusion

[41] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

[42] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Britt Hanley whose telephone number is (571) 270-3042. The examiner can normally be reached on Monday - Thursday, 6:30a-5:00p ET.

[43] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

[44] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Britt Hanley/ Examiner, Art Unit 2889	/Toan Ton/ Supervisory Patent Examiner Art Unit 2889
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